

# MOI MANASOTA OPTICS, INC.

*an ISO 9001 registered company*

**AN ISO 9001-2008 REGISTERED, VETERAN OWNED SMALL BUSINESS (VOSB)**



## Overview

**Manasota Optics, Inc. (MOI) is a “build to print” manufacturer of metal optical components that are used in the Defense and Aerospace Sector**

- Founded in 1994 in Sarasota County Florida (Approximately 50 miles south of Tampa). MOI fabricates optics that are used in various sighting systems in military vehicles, laser rangefinders, targeting and infrared countermeasure systems, scanners, biological & chemical detection systems and space applications.
- Most production employees have over 25 years experience with metal optics.
- Key supplier to many US Prime Defense Contractors as well as Defense Contractors to the German and Turkish Governments. Our customers include General Dynamics (Outstanding Supplier Performance & Delivery Awards for 2009 & 2010), Northrop Grumman, Lockheed Martin, FLIR, L3, BAE Systems, U.S Government, ITT, Raytheon, Kearfott Corporation, MIT Lincoln Labs, and various Universities.



## Manufacturing Services

- **Diamond Turning**
  - Materials: Bare Aluminum, Copper, Silver, Invar, & Brass as well as Nickel Plated Aluminum
  - Plano (Flat) Optics up to 15" in length.
  - 1/8 Wave PV, 40-80 Angstroms RMS
  - Ability to hold tight angular tolerances
- **Polishing**
  - Materials: Nickel Plated Aluminum, Al-BeMet, Copper, & Beryllium, a variety of Stainless Steels, & Titanium
- **Thin Film Coating**
  - Up to 18" Plano (Flat) or spherical optics
  - Protected Silver, Aluminum, & SiO Overcoat
  - Meets Environmental and Durability Military Specification Requirements.
- **Environmental Testing Services**
  - Spectral Reflectance - UV thru Far IR at multiple Angles of Incidence.
  - 24+ Hr Humidity Testing at 95% + @ 120°F
  - Heat Treat Stress Relieve up to 500°F
  - Thermal Cycle and Temperature Influence from -100° F to 212° F
- **Electroless Nickel Plating**
  - Specifically designed for metal optical components used in Aerospace.
  - Low stress / high phosphorous plating process
  - Bath originally designed for NASA for low CTE mismatch with Beryllium
- **Electrolytic Gold Plating**
  - Optical Gold Plating for reflectance

## Mission

Our mission is to provide our customers products that are second to none in our industry. Our vast experience with metal optics has allowed us to evaluate our customer's design for manufacturability which in return creates a functional, but cost efficient product that is delivered to our customers when promised.

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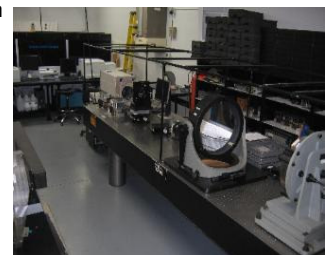
## Manufacturing Equipment

- **Diamond Turning—Flycutting Machines**
  - 6 SPDT machines with additional machines to be added in the near future
  - Upgraded Controllers installed in 2009
- **Polishing / Grinding Machines**
  - 72" Strasbaugh Planetary Polisher
  - 9 Single Spindle Polishing / Lapping Machines
  - Dual Spindle Polishing / Lapping Machine
- **Thin Film Coating Machine**
  - 36" x 36" x 36" Box Coater with Sycon Disposition Controller and Brooks Vacuum Gage Controller and CV-8 Power Supply.
  - Tenney 30C - 30 Cubic Foot Temperature Chamber with ranges of -100°F to 212°F
  - Humidity / Thermal Chamber - Cincinnati Sub Zero Bench Top



## Quality & Metrology Testing Equipment

- Zygo® GPI-XP Phase Shift Interferometer
- Zygo® 6" Dynaflect Transmission Flat
- Zygo® 4" Transmission Flat
- Zygo® Mark II Interferometer with radius slide
- Zygo® Transmission Sphere f/0.75
- Zygo® Transmission Sphere f/1.5
- Zygo® Transmission Sphere f/3.3
- Zygo® Transmission Sphere f/7.2
- Ultradex® Sub Arc Second Accuracy Rotary Table
- **For Larger Optics**
  - 18" Collimating Lens, OSTI
  - Davidson 16" Optical Flat
  - Richey Commons Sphere
- Perkin Elmer Lambda 950 Spectrophotometer URA Attachment (Absolute Reflectance Measurement) Reflectivity ranges from 200nm - 3300nm
- Perkin Elmer GX Optica Spectrophotometer. FTIR Reflectivity ranges from 1 Micron - 25+ Microns; PIKE II Variable Angle Accessory
- WYKO NCP-1000 Non-Contact Profilometer
- Brysen Optical Half Aluminized Scratch / Dig Standards
- Tenney TC-30 Temperature Thermal Chamber with Watlow F4 Controller & Honeywell Chart Recorder
- Blue M Temperature Stress Relieve Chamber with Watlow F4 Controller & Honeywell Chart Recorder
- Cincinnati Sub Zero Humidity & Thermal Chamber with Watlow F4 & Honeywell Chart Recorder
- Nikon 6D Autocollimator with calibrated angle blocks



## Contact Information

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**David A. Lowery**

Founder



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